BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

WHAT IS CLAIMED IS:

1. A liquid crystal display device comprising:

a plurality of gate lines formed in parallel to each other;

a plurality of source lines formed in parallel to each other and orthogonal to the gate lines;

an array of cells formed in rows and columns, each of the cells being formed near an intersection of one of the gate lines and one of the source lines;

a first transistor of each of the cells disposed at an N-th row and M-th column, N and M being integers, driven by an (N-2)-th gate line; and

a second transistor of the each of the cells driven by an N-th gate line.

2. The device of claim 1, each of the cells further comprising a capacitor formed between an electrode and the (N-2)-th gate line.

3. The device of claim 1, each of the cells further comprising a capacitor formed between an electrode and an (N-1)-th gate line.

4. The device of claim 1, each of the cells further comprising a first capacitor formed between an electrode and the (N-2)-th gate line, and a second capacitor formed between the electrode and an (N-1)-th gate line.

5. The device of claim 4, the first capacitor being charged to a first voltage level in response to a fist state of a signal transmitted on the (N-2)-th gate

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

line, and being discharged to a second voltage level in response to a second state of the signal transmitted on the (N-2)-th gate line.

6. The device of claim 5, an electrical potential at the electrode being pulled up to a third voltage level in response to a first state of a signal transmitted on the (N-1)-th gate line, and being pulled down to the second voltage level in response to a second state of the signal transmitted on the (N-1)-th gate line.

7. The device of claim 6, the first capacitor being charged from the second voltage level to the first voltage level in response to a first state of a signal transmitted on the N-th gate line.

8. A liquid crystal display device comprising:

a plurality of gate lines formed in parallel to each other;

a plurality of source lines formed in parallel to each other and orthogonal to the gate lines; and

an array of cells formed in rows and columns, each of the cells disposed near an intersection of an N-th gate line and an M-th source line, N and M being integers, further comprising:

a first capacitor formed between an electrode and an (N-2)-th gate line; and

a second capacitor formed between the electrode and an (N-1)-th gate line.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

9. The device of claim 8 further comprising a first transistor including a gate coupled to the (N-2)-th gate line, and a second transistor including a gate coupled to the N-th gate line.

10. The device of claim 9, the first transistor further comprising a first terminal coupled to the electrode, and a second terminal coupled to the M-th source line.

11. The device of claim 9, the second transistor further comprising a first terminal coupled to the electrode, and a second terminal coupled to the M-th source line.

12. The device of claim 8 wherein a signal transmitted on the M-th source line includes a first voltage level and a second voltage level.

13. The device of claim 12, the first capacitor being charged to a third voltage level between the first and second voltage levels after a selection period of the (N-2)-th gate line.

14. The device of claim 12, an electrical potential of the electrode being kept at a third voltage level between the first and second voltage levels after a selection period of the (N-1)-th gate line.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

15. The device of claim 12, the first capacitor being charged to the first voltage level after a selection period of the N-th gate line from a third voltage level between the first and second voltage levels.

16. A method of driving a liquid crystal display device comprising:

providing a plurality of gate lines formed in parallel to each other;

providing a plurality of source lines formed in parallel to each other and orthogonal to the gate lines;

forming an array of cells in rows and columns, each of the cells being disposed near an intersection of an N-th gate line and an M-th source line, N and M being integers;

forming a first transistor and a second transistor in the each of the cells;

driving the first transistor through an (N-2)-th gate line; and

driving the second transistor through the N-th gate line.

17. The method of claim 16 further comprising forming a first capacitor between an electrode and the (N-2)-th gate line, and a second capacitor between the electrode and an (N-1)-th gate line.

18. The method of claim 17 further comprising providing a signal including a first voltage level and a second voltage level from the M-th source line to the first and second transistors.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

19. The method of claim 18 further comprising selecting the (N-2)-th gate line, and charging the first capacitor to a third voltage level between the first and second voltage levels after a selection period of the (N-2)-th gate line.

20. The method of claim 18 further comprising selecting the (N-1)-th gate line, and keeping an electrical potential of the electrode at a third voltage level between the first and second voltage levels after a selection period of the (N-1)-th gate line.

21. The method of claim 18 further comprising selecting the N-th gate line, and charging the first capacitor to the first voltage level after a selection period of the N-th gate line from a third voltage level between the first and second voltage levels.

22. A method of driving a liquid crystal display device comprising:

providing a plurality of gate lines formed in parallel to each other;

providing a plurality of source lines formed in parallel to each other and orthogonal to the gate lines;

forming an array of cells in rows and columns, each of the cells being disposed near an intersection of a corresponding N-th gate line and a corresponding M-th source line, N and M being integers;

providing a signal including a first voltage level and a second voltage level from the M-th source line;

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

selecting an (N-2)-th gate line;

charging a first capacitor of the each of the cells to a third voltage level between the first and second voltage levels after a selection period of the (N-2)-th gate line;

selecting an (N-1)-th gate line;

keeping an electrical potential of a terminal of the first capacitor at the third voltage level after a selection period of the (N-1)-th gate line;

selecting the N-th gate line; and

charging the first capacitor to the first voltage level after a selection period of the N-th gate line from the third voltage level.

23. The method of claim 22 further comprising forming a first transistor and a second transistor in the each of the cells.

24. The method of claim 23 further comprising driving the first transistor through the (N-2) gate line.

25. The method of claim 23 further comprising driving the second transistor through the N-th gate line.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com